Client's ref.: TSMC2003-1065/PE:DCLin
Our ref.: 0503-A30136-USf/Yianhou/Kevin/Nelson

What Is Claimed Is:

1   1.   A reliability assessment system, comprising:

2   an interface to receive input items; and

3   an assessment engine to perform a reliability assessment

4   accordingly, generate a result of the reliability

5   assessment, and display the result on the interface.

1   2.   The system of claim 1 wherein the interface is a

2   web-based interface.

1   3.   The system of claim 1 wherein the assessment engine

2   further writes the input items and the corresponding result to

3   a database.

1   4.   The system of claim 1 further comprising an email

2   server.

1   5.   The system of claim 1 wherein the interface further

2   receives selections of a process for a product and a

3   corresponding output item.

17

Client's ref.: TSMC2003-1065/PE:DCLin
Our ref.: 0503-A30136-USf/Yianhou/Kevin/Nelson

1   6.   The system of claim 5 wherein the assessment engine

2   further performs the reliability assessment accordingly,

3   generating the result.

1   7.   The system of claim 5 wherein the product is a

2   semiconductor product.

1   8.   The system of claim 7 wherein the process comprises

2   GOI, HCI, NBTI, EM or IMD-TDDB.

1   9.   The system of claim 1 wherein the interface further

2   receives a selection of an assessment item for a product.

1   10.   The system of claim 9 wherein the assessment engine

2   further performs the reliability assessment for the assessment

3   item accordingly, generating the result of the assessment item.

1   11.   The system of claim 9 wherein the assessment item

2   comprises EFR (early failure rate), LTFR (long term failure

3   rate), overdrive, overshoot, or temperature of the product.

1   12.   The system of claim 1 wherein the input items comprise

2   technology and specifications of a product.

18

Client's ref.: TSMC2003-1065/PE:DCLin
Our ref.: 0503-A30136-USf/Yianhou/Kevin/Nelson

1   13. The system of claim 12 wherein the product is a

2 semiconductor product.

1   14. The system of claim 13 wherein the technology is

2 geometry of the semiconductor product.

1   15. The system of claim 13 wherein the specification

2 comprises parameters comprising at least a voltage and a

3 lifetime of the semiconductor product.

1   16. A computerized reliability assessment method,

2 comprising the steps of:

3   receiving input items through a web-based interface;

4   performing a reliability assessment accordingly; and

5   generating a result of the reliability assessment.

1   17. The method of claim 16 further comprising displaying

2 the result on the web-based interface.

1   18. The method of claim 16 further comprising writing the

2 input items and the corresponding result to a database.

19

Client's ref.: TSMC2003-1065/PE:DCLin
Our ref.: 0503-A30136-USf/Yianhou/Kevin/Nelson

1   19.   The method of claim 16 further comprising sending an

2   email notification.

1   20.   The method of claim 16 further comprising receiving

2   selections of a process for a product and a corresponding output

3   item through the web-based interface.

1   21.   The method of claim 20 further comprising performing

2   the reliability assessment accordingly, generating the result

3   of the output item.

1   22.   The method of claim 20 wherein the product is a

2   semiconductor product.

1   23.   The method of claim 22 wherein the process comprises

2   GOI, HCI, NBTI, EM or IMD-TDDB.

1   24.   The method of claim 16 further comprising receiving

2   a selection of an assessment item for a product through the

3   web-based interface.

20

Client's ref.: TSMC2003-1065/PE:DCLin
Our ref.: 0503-A30136-USf/Yianhou/Kevin/Nelson

1   25.   The method of claim 24 further comprising performing

2   the reliability assessment for the assessment item accordingly,

3   generating the result of the assessment item.

1   26.   The method of claim 24 wherein the assessment item

2   comprises EFR (early failure rate), LTFR (long term failure

3   rate), overdrive, overshoot, or temperature of the product.

1   27.   The method of claim 16 wherein the input items

2   comprise technology and specifications of a product.

1   28.   The method of claim 27 wherein the product is a

2   semiconductor product.

1   29.   The method of claim 28 wherein the technology is

2   geometry of the semiconductor product.

1   30.   The method of claim 28 wherein the specification

2   comprises parameters comprising at least a voltage and a

3   lifetime of the semiconductor product.

21

1   31.   A machine-readable storage medium storing a computer /

2   program which, when executed, directs a computer to perform a

3   method of reliability assessment, comprising the steps of:

4   receiving input items through a web-based interface;

5   performing a reliability assessment accordingly; and

6   generating a result of the reliability assessment.

1   32.   The storage medium of claim 31 further comprising

2   displaying the result on the web-based interface.

1   33.   The storage medium of claim 31 further comprising

2   writing the input items and the corresponding result to a

3   database.

1   34.   The storage medium of claim 31 further comprising

2   sending an email notification.

1   35.   The storage medium of claim 31 further comprising

2   receiving selections of a process for a product and a

3   corresponding output item through the web-based interface.

22

Client's ref.: TSMC2003-1065/PE:DCLin
Our ref.: 0503-A30136-USf/Yianhou/Kevin/Nelson

1   36. The storage medium of claim 35 further comprising

2   performing the reliability assessment accordingly, generating

3   the result of the output item.

1   37. The storage medium of claim 35 wherein the product is

2   a semiconductor product.

1   38. The storage medium of claim 37 wherein the process

2   comprises GOI, HCI, NBTI, EM or IMD-TDDB.

1   39. The storage medium of claim 31 further comprising

2   receiving a selection of an assessment item for a product through

3   the web-based interface.

1   40. The storage medium of claim 39 further comprising

2   performing the reliability assessment for the assessment item

3   accordingly, generating the result of the assessment item.

1   41. The storage medium of claim 39 wherein the assessment

2   item comprises EFR (early failure rate), LTFR (long term failure

3   rate), overdrive, overshoot, or temperature of the product.

23

1   42.   The storage medium of claim 31 wherein the input items

2   comprise technology and specifications of a product.

1   43.   The storage medium of claim 42 wherein the product is

2   a semiconductor product.

1   44.   The storage medium of claim 43 wherein the technology

2   is geometry of the semiconductor product.

1   45.   The   storage   medium   of   claim   43   wherein   the

2   specification comprises parameters further comprising at least

3   a voltage and a lifetime of the semiconductor product.

1   46.   A reliability assessment method, comprising the steps

2   of: /

3   providing   an   online   reliability   assessment   of   a

4   reliability inquiry via a web-based interface; and

5   generating a result of the reliability assessment on the

6   web-based interface.

1   47.   The method of claim 46 further comprising receiving

2   input items for the reliability assessment, in which the result

3   of the reliability assessment is generated accordingly.

24

1   48.   The method of claim 46 further comprising receiving

2   selections of a process for a product and a corresponding output

3   item through the web-based interface.

1   49.   The method of claim 48 further comprising performing

2   the reliability assessment accordingly, generating the result

3   of the output item on the web-based interface.

1   50.   The method of claim 46 further comprising receiving

2   a selection of an assessment item for a product through the

3   web-based interface.

1   51.   The method of claim 50 further comprising performing

2   the reliability assessment for the assessment item accordingly,

3   generating the result of the assessment item on the web-based

4   interface.

1   52.   The method of claim 50 wherein the assessment item

2   comprises EFR (early failure rate), LTFR (long term failure

3   rate), overdrive, overshoot, or temperature of the product.

1   53.   A set of application program interfaces embodied on

2   a computer-readable medium for execution on a computer in

25

Client's ref.: TSMC2003-1065/PE:DCLin
Our ref.: 0503-A30136-USf/Yianhou/Kevin/Nelson

3   conjunction with an application program that performs a

4   reliability assessment, comprising:

5   a first interface to receive input items of a reliability

6   inquiry; and

7   a second interface to display a result of the reliability

8   assessment, in which the result is generated

9   accordingly.

1   54. The set of application program interfaces of claim 53

2   further comprising a third interface to receive selections of

3   a process for a product and a corresponding output item, in which

4   the reliability assessment is performed accordingly.

1   55. The set of application program interfaces of claim 53

2   further comprising a fourth interface to receive a selection of

3   an assessment item for a product, in which the reliability

4   assessment for the assessment item is performed accordingly.

26